

COMMITTEE ON FOOD RESEARCH

research projects

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DOCUMENT SECTION

RESEARCH PLANNING
RESEARCH PROGRAMS
RESEARCH ADMINISTRATION

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QUARTERMASTER FOOD AND CONTAINER INSTITUTE FOR THE ARMED FORCES

Committee on Food Research

QUARTERMASTER FOOD & CONTAINER INSTITUTE FOR THE ARMED FORCES

CHICAGO

research projects

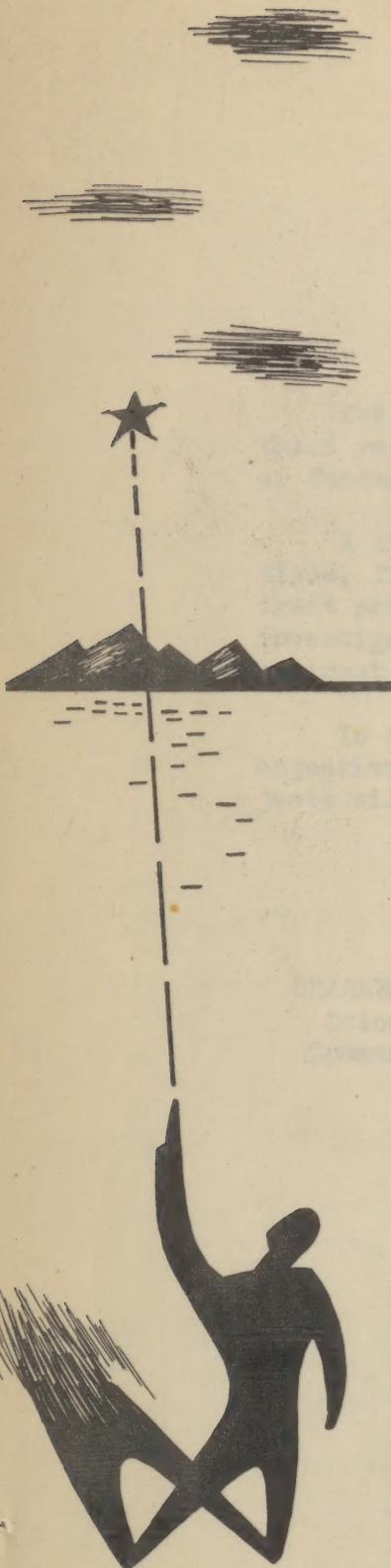
1947-1948

SEPTEMBER 1947

RESEARCH AND DEVELOPMENT BRANCH

MILITARY PLANNING DIVISION

OFFICE OF THE QUARTERMASTER GENERAL



FOREWORD

The Committee on Food Research is now in its third year of administering a coordinated program of fundamental research in food and allied subjects.

A listing of the current investigations by title, file number, institution, department, contract price, administrative official, official investigator, collaborators, contract number and contract period is here presented.

In the near future a QMC manual outlining the objectives and plan of attack of the 1947-1948 projects will be published.

CHARLES S. LAWRENCE
Colonel, Q.M.C.
Commanding Officer

GEORGE GELMAN
Technical Director

COMMITTEE ON FOOD RESEARCH

QUARTERMASTER FOOD AND CONTAINER INSTITUTE FOR THE ARMED FORCES

I. COMMITTEE ON FOOD RESEARCH

George Gelman, Chairman, Technical Director, Quartermaster Food and Container Institute for the Armed Forces

Dr. Emil M. Mrak, Associate Professor, Division of Food Technology, University of California, Berkeley, California

Dr. W. F. Geddes, Chief, Division of Agricultural Biochemistry, University of Minnesota, Minneapolis, Minnesota

Dr. H. E. Longenecker, Dean of the Graduate School, University of Pittsburgh, Pittsburgh, Pennsylvania

Dr. George F. Stewart, Research Professor, Department of Poultry Husbandry, Iowa State College, Ames, Iowa

Dr. M. L. Anson, Director of Chemical Research, Continental Foods, Inc., Hoboken, New Jersey

Dr. Howard Lightbody, Director of Food Laboratories, QMF&CI

Dr. Harry Fevold, Chief, Food Research Division

Dr. Daniel Melnick, Chief, Food Development Division

Major J. Grant Armstrong, Royal Canadian Army Service Corps., Chief, Technical Information Office

Dr. Robert Johnson, Medical Nutrition Laboratory, Office of The Surgeon General

II. EXECUTIVE BOARD

George Gelman, Chairman, Technical Director

Dr. Howard Lightbody, Director of Food Laboratories

Dr. Harry Fevold, Chief, Food Research Division

Dr. Daniel Melnick, Chief, Food Development Division

Major J. Grant Armstrong, Chief, Technical Information Office

Dr. Robert E. Johnson, Medical Nutrition Lab., Office of The Surgeon General

III. SCIENTIFIC ADVISORY PANEL

1. University, Hospital, and Research Institutions:

Dr. Ralph Conrad, Bureau of Industrial Research, University of Denver, Denver, Colorado

Dr. S. T. Coulter, Professor of Dairy Husbandry, University of Minnesota, Minneapolis, Minnesota

Dr. Samuel Lepkovsky, Professor of Poultry Husbandry, University of California, Berkeley, California

Dr. A. Frank Ross, Associate Professor, Department of Plant Pathology, Cornell University, Ithaca, New York

Dr. T. L. Swenson, Director of Food Technology, Stanford Research Institute, Stanford University, Palo Alto, Calif.

Dr. O. B. Williams, Professor & Chairman of Dept. of Botany and Bacteriology, University of Texas, Austin, Texas

Dr. Herbert Pollack, Mount Sinai Hospital, New York, New York

2. Industry and Industry Research Organizations:

Dr. S. M. Cantor, Director of Research, American Sugar Refining Company, Philadelphia, Pa.

Dr. H. C. Diehl, Director, Refrigeration Research Foundation, Inc., New York, New York

Dr. C. G. King, Scientific Director, Nutrition Research Foundation, Inc., New York, New York

Dr. H. R. Kraybill, Director of Research, American Meat Institute Research Foundation, Chicago, Illinois

3. Government

Dr. LeRoy Voris, Executive Secretary, Food and Nutrition Board, National Research Council, Washington, D. C.

Dr. Hazel K. Stiebeling, Chief, Bureau of Human Nutrition & Home Economics, Agricultural Research Admin., U. S. Dept. of Agriculture, Washington, D. C.

Dr. Callie M. Coons (alternate for Dr. Stiebeling), Assistant Chief of the Bureau of Human Nutrition & Home Economics, Agricultural Research Admin., U. S. Dept. of Agriculture, Washington, D. C.

Dr. George E. Holm, Division of Dairy Research Laboratories, Bureau of Dairy Industry, U. S. Dept. of Agriculture, Washington, D. C.

Dr. Charles A. Cary, Head, Division of Nutrition and Physiology, Bureau of Dairy Industry, Agricultural Research Admin., U. S. Dept. of Agriculture, Washington, D. C.

Dr. E. N. Tierney, Bureau of Animal Industry, Agricultural Research Admin., U. S. Dept. of Agriculture, Washington, D. C.

Dr. Louis Howard, Chief, Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Dept. of Agriculture, Washington, D. C.

Dr. Paul Dunbar, Commissioner, Food and Drug Administration,
Social Security Building, Washington, D. C.

Dr. W. B. White, Head, Food Division, Food and Drug
Administration, Washington, D. C.

Dr. G. G. Slocum, Head, Microbiological Division, Food and
Drug Administration, Washington, D. C.

Dr. A. J. Lehman, Head, Pharmacology Division, Food and
Drug Administration, Washington, D. C.

Dr. E. M. Nelson, Head, Vitamin Division, Food and Drug
Administration, Washington, D. C.

Mr. Joseph F. Puncochar, Fishery Technological Laboratory,
Fish and Wild Life Service, U. S. Department of the
Interior, Boston, Massachusetts

Dr. W. C. Crittenden, Associate Director, National Bureau
of Standards, U. S. Department of Commerce, Washington, D. C.

Mr. William E. Braithwaite (alternate for Dr. Crittenden),
Commodity Standards Division, National Bureau of Standards,
Washington, D. C.

4. Armed Forces:

Dr. Robert E. Johnson, Director, Medical Nutrition Laboratory,
Office of The Surgeon General, U. S. Army, Chicago, Illinois

Dr. True W. Robinson, Aero Medical Laboratory, Air Materiel
Command, Wright Field, Dayton, Ohio

Lt. James Roth, M. C., Physiology Branch, Aero Medical
Laboratory, Wright Field, Dayton, Ohio

Dr. Orr E. Reynolds, Head, Physiology Section, Medical Sciences
Branch, Office of Naval Research, Navy Dept., Washington, D. C.

Dr. M. C. Shelesnyak, Head, Environmental Physiology Section,
Medical Sciences Branch, Office of Naval Research, Navy
Department, Washington, D. C.

IV. PROJECT STUDY PANELS

1. Members of the Executive Board are exofficio members of the
Project Study Panels.
2. Other laboratory members are to be assigned.

COMMITTEE ON FOOD RESEARCH PROGRAM

FOOD RESEARCH SURVEY & RESEARCH PLANNING

CF-61-02-01 - Survey of Food Research in the United States

S-100	Nat'l. Academy of Sciences	Survey of Food Research in the United States
S-101	Stanford Research Institute	Chemical Requirements of the Food Industry

NUTRITION

CF-61-03-06 - Ration Evaluation

N-200	Quaker Oats Company	The Influence of Environmental Conditions on the Behavior and Composition of Cereal Proteins
N-201	General Mills, Inc.	Amino Acids in Cereal Proteins
N-901	University of Chicago	Protein Evaluation Studies
N-911	University of Wisconsin	Nutritional Value of Army Rations
N-1000	Bureau of Human Nutrition & Home Economics, USDA	Food Composition Values
N-1001	Pentagon Nutrition Laboratory	Food Preparation & Its Effect on the Nutritive Value & Acceptability
P-1013	University of California	The Role of Naturally Present Deleterious Compounds in Acceptability

NUTRITION

CF-61-03-07 - Mechanisms of Food Metabolism

<u>FILE</u>	<u>INSTITUTION</u>	<u>TITLE OF PROJECT</u>
N-1102	Columbia University	Application of Isotope Technique to the Study of Food Utilization
N-1117	California Inst. of Tech.	The Cellular Chemistry of Amino Acids
N-1118	University of California	Synthesis of Organic Compounds Labelled with C ¹⁴ by Biological Methods

CF-61-03-08 - Nutritional Studies on Low Caloric Intake Rations

N-1112	New York Medical College	Protein Metabolism Study on Reduced Caloric & Water Intakes
N-1115	Iowa State College	Nitrogen Metabolism in White Rats as Affected by Source & Caloric Intake
N-1116	Rutgers University	The Utilization of Proteins and Amino Acids

CF-61-03-09 - Effect of Environment on Nutrition

N-801	University of Illinois	Nutrition & Resistance to Climatic Stress; Literature Survey & Critical Review
N-802	Harvard University	Nutritional Requirements for Man at Work
N-1105	Emory W. Thurston Laboratories	Effect of Stress Factors on Nutrition
N-1113	University of Utah	Effect of Previous Diet on the Ability of Animals to Withstand Adverse Conditions

NUTRITION

CF-61-03-10 - Microbiological Aspects of Health Hazards in Foods

<u>FILE</u>	<u>INSTITUTION</u>	<u>TITLE OF PROJECT</u>
M-200	University of Chicago	<u>Clostridium botulinum</u> in Canned Bread
M-201	University of Minnesota	Investigation of Rope & Botulinum in Canned Bread
M-605	University of Texas	Spore Formation & Spore Germination of Anaerobic Food Spoilage Organisms Especially <u>Clostridium botulinum</u>
M-606	University of Chicago	Factors Affecting Heat Resistance of Spores of <u>Clostridium botulinum</u>
M-608	Iowa State College	Incidence of Putrefactive Anaerobic Spores in Meat Products Prior to Heat Processing
M-609	Armour and Company	The Determination of Base Line Data on the Presence of Heat Resistant Putrefactive Spores in Meat Products
M-900	University of Texas	Mode of Action of Certain Anti-bacterial Agents
M-903	University of Chicago	Significance of Salmonella Types

STABILITY

CF-61-04-04 - Lipid Deterioration

L-201	University of Minnesota	Fat Deterioration in Flour and Prepared Mixes in Relation to Performance Value
L-202	Kroger Food Foundation Proctor & Gamble Company	The Stability of Various Shortenings in Canned Bread
L-300	Laboratory of Polarographic Analysis	Determination of Factors Affecting Copper Catalysis
L-307	Iowa State College	A Study of Oxidative Deterioration of Milk Fat
L-308	Kraft Food Company	Trace Metal Contamination & Its Effect on Milk Fat Deterioration

STABILITY

CF-61-04-04 (cont'd.)

<u>FILE</u>	<u>INSTITUTION</u>	<u>TITLE OF PROJECT</u>
L-309	Cornell University	Lipid Deterioration in Dairy Products
L-601	Kansas State College	Fat Rancidity in Eviscerated Poultry
L-701	University of California	Cytological & Histo-Chemical Studies of the Lipids in Vegetables & Their Role in Deterioration
L-703	University of California	Fractionation & Purification of Lipids in Vegetables
L-704	University of California	Deteriorative Changes in the Pigments of Vegetables During Storage
L-800	University of Pittsburgh	A Critical Survey & Evaluation of the Literature on Fat Deterioration
L-900	American Meat Institute, Foundation	Fat Autoxidation & the Effects of Inhibitors
L-901	University of Pittsburgh	An Experimental Investigation of Oxidative Rancidity in Fats
L-902	University of Minnesota	Course & Mechanism of the Autoxidation of Fats
L-903	Purdue University	Causes & Prevention of Oxidative Deterioration in Fats

CF-61-04-05 - Non-Enzymatic Browning Deterioration

B-200	Quaker Oats Company	The Influence of Environmental Conditions on the Formation, Stability or Behavior of Furan Compounds
B-300	American Dry Milk Institute, Inc.	The Chemistry of Browning of Dry Milk Products
B-302	Macdonald College	A Study of the Chemical Reactions Involved in the Browning of Dried Milk Powder

STABILITY

CF-61-04-05 (cont'd.)

<u>FILE</u>	<u>INSTITUTION</u>	<u>TITLE OF PROJECT</u>
B-401	University of California	The Chemical Deterioration of Dried Fruits During Storage
B-702	Purdue University	Discoloration of White Potatoes During Dehydration
B-902	University of Pittsburgh	Interaction of Carbohydrates With Amino Acids & Peptides from Standpoint of Promotion & Inhibition
B-903	Northwestern University	The Browning Reaction
B-905	Ohio State University	A Study of the Fundamental Nature of the Browning Reaction
B-906	Cornell University	The Browning Reaction in Sugar Amino Acid Systems
B-907	Michigan State College of Agriculture and Applied Science	A Study of Some Chemical Factors Involved in the Browning of Certain Food Constituents
B-908	Central Research Lab., General Foods Corp.	The Browning Reaction As a Factor Involved in the Development of Color & Flavor in Foods
B-909	Corn Products Refining Co.	The Role of Hydroxymethylfurfural in Browning

CF-61-04-06 - Microbiological Food Deterioration

M-100	University of Nebraska	Bacteriological Aspects of Pre-cooked Frozen Foods
M-601	Bureau of Animal Industry, U.S.D.A.	A Study of Factors Affecting the Keeping Quality of Bacon
M-607	University of Minnesota	Investigation of Canned Bacon Spoilage
M-610	Duke University	Molds of Meats
M-901	University of California	Action of Sterilizing Agents on Food
M-902	University of California	Fate of Fumigants in Treated Foods

STABILITY

CF-61-04-07 - Bread Deterioration Due to Staling

<u>FILE</u>	<u>INSTITUTION</u>	<u>TITLE OF PROJECT</u>
C-200	University of Nebraska	The Role of Starch in Bread Staling
C-204	Merck and Company, Inc.	The Relative Stability of Thiamin Chloride & Other Derivatives in Canned Bread
C-205	Purdue University	Prevention of Bread Staling
C-300	University of Minnesota	The Physical & Chemical Changes Occurring in Bread During Storage
C-302	Kroger Food Foundation	Fundamental Investigations on the Stability of Canned Bread
C-304	R. T. Vanderbilt Co., Inc.	The Effect of Various Bakery Ingredients on the Rate of Staling of Bread

CF-61-04-08 - Dairy Products Deterioration

D-202	American Dry Milk Institute, Inc.	Foam Properties of Dry Milks
D-203	University of Denver	The Formation of Surface Layer of Dehydrated Milk
D-205	University of Illinois	The Isolation of the Compounds Responsible for Unpalatable Dried Whole Milk
D-305	University of Minnesota	The Mechanism of Deteriorative Changes in Milk Products

CF-61-04-09 - Meat Products Deterioration

A-300	Iowa State College	Post Mortem Changes in Beef; the Effects of Aging and Cooking Methods
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STABILITY

CF-61-04-10 - Fruit Products Deterioration

<u>FILE</u>	<u>INSTITUTION</u>	<u>TITLE OF PROJECT</u>
F-302	University of Delaware	Pectic Changes in Dehydrated Foods
F-303	Oregon State College	Pectin Deterioration Studies

CF-61-04-11 - Vegetable Products Deterioration

V-200	Overly Biochemical Research Foundation, Inc.	Study of Oxidative Enzymes in White and Sweet Potatoes
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PREFERENCE

CF-61-05-02 - Psychophysiological Studies

P-1001	Jefferson Medical College	Studies on the Physiology of Appetite
P-1004	Columbia University	Study on Appetite Depressants in Relation to Ration Acceptability
P-1005	University of Minnesota Medical School	Effect of Spices and Condiments on the Gastric Mucosa and Gastric Secretions
P-1007	Yale University	Effect of Food and Environment on Food Intake
P-1009	Mount Sinai Hospital	Studies on the Physiology of Voluntary Food Intake
P-1010	Sharpe & Dohme, Inc.	Influence of Variations in Diet Upon Voluntary Food Intake of Experimental Animals
P-1011	Columbia University	The Physiology of Appetite
P-1012	University of California	Effect of Diet and Environment on Pancreatic Secretion
P-1014	University of Southern California	Human Studies on the Physiology of Acceptability
P-1015	University of Utah	Studies on Appetite Mechanism as Determined by Nutrition

PREFERENCE

CF-61-05-02 (cont'd.)

<u>FILE</u>	<u>INSTITUTION</u>	<u>TITLE OF PROJECT</u>
P-1016	New York University Goldwater Memorial Hospital	Influence of Food Constituents Upon Acceptability of Foods
P-1017	Rutgers University	Utilization of Proteins Correlated with Appetite and Intestinal Flora
P-1018	University of Illinois	Preparation of a Critical Re- view of the Psychological Literature Upon Food Accep- tance in Animals & Analysis of Laboratory Data Relating to Palatability and Appetite
P-1100	University of Pittsburgh	Food Acceptance Under Emotional Stress

CF-61-05-06 - Psychophysical Studies of Taste and Odor Perception

P-301	Ohio State University Research Foundation	Chemical Changes in Milk Powder During Manufacture & Storage & the Response of the Taste Mechanism to These Changes
P-1000	Permanente Foundation Hospital	Human Appetite

CF-61-05-07 - Psychosociological Studies

P-900	University of Vermont	Appetite Levels of Food Consumption - Vermont
P-903	Clemson Agricultural College	Appetite Levels of Food Consumption - South Carolina
P-907	Iowa State College	Appetite Levels of Food Consumption - Iowa

CONTAINER RESEARCH & DEVELOPMENT

CF-36-07-08 - Container Materials

<u>FILE</u>	<u>INSTITUTION</u>	<u>TITLE OF PROJECT</u>
R-101	Forest Products Laboratory	Basic Data For The Use of Fiberboard in Shipping Containers

FOOD RESEARCH SURVEY AND RESEARCH PLANNING
CF-61-02-01

S-100 Survey of Food Research in the United States

National Academy of Sciences, National Research
Council, Washington, D. C.

Official Investigator - Dr. A. Leroy Voris
Administrative Official - Dr. Frank B. Jewett

Contract W11-009-qm-70238

1 Nov. 1947 - 31 Dec. 1947 '47 Funds \$15,000

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$10,000

S-101 Chemical Requirements of the Food Industry

Stanford Research Institute
Stanford University, California

Official Investigator - Dr. T. L. Swenson
Administrative Official - Mr. Wm. F. Talbot

Contract Arrangement Pending

1 Sep. 1947 - 31 Aug. 1948 '48 Funds O- \$5,618

NUTRITION

RATION EVALUATION
CF-61-03-06

N-200 The Influence of Environmental Conditions on the
Behavior and Composition of Cereal Proteins

The Quaker Oats Company, 345 E. 25th Street,
Chicago 16, Illinois

Official Investigator - Dr. F. N. Peters

Contract by Cooperative Arrangement

1 Dec. 1946 - 30 November 1947

RATION EVALUATION

N-201 Amino Acids in Cereal Proteins

General Mills, Inc., 2010 East Hennepin Ave.,
Minneapolis 13, Minn.

Official Investigator - Dr. John S. Andrews
Collaborator - Dr. Jane B. Spence

Contract by Cooperative Arrangement
1 May 1947 - 30 April 1948

N-901 Protein Evaluation Studies

University of Chicago, Department of Pathology,
Chicago, Illinois

Official Investigator - Dr. Paul R. Cannon
Administrative Official - Mr. W. B. Harrell

Contract No. W11-009-qm-70203

1 July 1946 - 31 Dec. 1947 '47 Funds \$15,000

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$10,000

N-911 Nutritional Value of Army Rations

University of Wisconsin, College of Agriculture,
Madison, Wisconsin

Official Investigator - Dr. C. A. Elvehjem
Administrative Official - Dr. Eugene M. Sporn
Collaborator - Dr. A. W. Peterson

Contract W11-009-qm-70249

1 Jan. 1947 - 31 Dec. 1947 '47 Funds \$ 7,600

1 Jan. 48 - 31 Dec. 1948 '48 Funds A- \$ 7,600

RATION EVALUATION

N-1000 Food Composition Values

United States Department of Agriculture, Bureau of
Human Nutrition & Home Economics, Washington, D. C.

Official Investigator - Dr. Margaret C. Reid
Administrative Official - Dr. Hazel K. Stiebeling

Transfer of Funds

Req. No. 49-106-0120-47

1 Jul. 1946 - 30 June 1947 '47 Funds \$5,000

1 Jul. '47 - 30 June 1948 '48 Funds 0- \$5,000

N-1001 Food Preparation and Its Effect on the Nutritive Value and Acceptability

Pentagon Nutrition Laboratory, Room 1-B-1084,
Pentagon, Washington 25, D. C.

Official Investigator - Dr. Ben-Ami Ben-Dor
Administrative Official - Dr. Ben-Ami Ben-Dor

Contract W11-009-qm-70192

1 July 1946 - 30 June 1948 '47 Funds \$44,800

1 July 1947 - 30 June 1948 '48 Funds 0- \$ 5,500

P-1013 The Role of Naturally Present Deleterious Compounds in Acceptability

University of California, Division of Poultry Husbandry,
Berkeley, California

Official Investigator - Dr. Samuel Lepkovsky
Administrative Official - Mr. G. R. Hutchison

Contract W11-009-qm-70202.

1 July 1946 - 31 Dec. 1947 '47 Funds \$19,000

1 Jan. '48 - 31 Dec. 1948 '48 Funds A-\$13,000

MECHANISMS OF FOOD METABOLISM

CF-61-03-07

N-1102 Application of Isotope Technique to the Study of Food Utilization

Columbia University, College of Physicians and Surgeons, New York, New York

Official Investigator - Dr. Edgar G. Miller, Jr.
Collaborators - Dr. D. Rittenberg
- Dr. D. Shemin
- Dr. D. B. Sprinson
Administrative Official - Dean Willard Rappleye

Contract W11-009-qm-70234

1 March 1947 - 29 Feb. 1948 '47 Funds \$7,500

1 March 1948 - 29 Feb. 1948 '48 Funds A-\$7,500

N-1117 The Cellular Chemistry of Amino Acids

California Institute of Technology,
Pasadena 4, California

Official Investigator - Dr. G. W. Beadle
Administrative Official - Mr. James R. Page
Collaborator - Dr. N. H. Horowitz

Contract W11-009-qm-70170

1 July 1946 - 31 Dec. 1947 '47 Funds \$8,500

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A-\$5,000

N-1118 Synthesis of Organic Compounds Labelled with C¹⁴ by Biological Methods

University of California
Berkeley 4, California

Official Investigator - Dr. H. A. Barker
Administrative Official - Dean C. B. Hutchison

Contract W11-009-qm-70285

1 Feb 47 - 30 June 1948 '47 Funds \$3,820

NUTRITIONAL STUDIES ON LOW CALORIC INTAKE RATIONS
CF-81-03-08

N-1112 Protein Metabolism Study on Reduced Caloric and Water Intakes

New York Medical College, Welfare Island,
New York 17, New York

Official Investigator - Dr. David Schwimmer
Collaborator - Dr. Thomas H. McGavack
Administrative Official - Dr. Thomas H. McGavack

Contract W11-009-qm-70177

1 July 1946 - 30 Jun. 1947 147 Funds \$48,655

1 Jul 47 - 31 Dec 1947 148 Funds 0-\$25,000

N-1115 Nitrogen Metabolism in White Rats as Affected by Source and Caloric Intake

Iowa State College, Agricultural Experiment Station,
Ames, Iowa

Official Investigator - Dr. Pearl Swanson
Collaborator - Dr. Wanda Willman
Administrative Official - Mr. R. E. Buchanan

Contract W11-009-qm-70184

1 July 1946 - 31 Dec. 1947 147 Funds \$19,442

1 Jan. 1948 - 31 Dec. 1948 148 Funds A- \$15,000

N-1116 The Utilization of Proteins and Amino Acids

Rutgers University, Bureau of Biological Research,
New Brunswick, New Jersey

Official Investigator - Dr. James B. Allison
Collaborator - Mr. John A. Anderson
" - Mr. Robert D. Seeley
Administrative Official - Dean Albert E. Meder

Contract W11-009-qm-70194

1 July 1946 - 30 June 1948 147 Funds \$9,825

1 July 1948 - 30 June 1949 148 Funds A- \$5,500

EFFECT OF ENVIRONMENT ON NUTRITION

CF-61-03-09

N-801 Nutrition and Resistance to Climatic Stress;
Literature Survey and Critical Review

University of Illinois, Agricultural Experiment
Station, Urbana, Illinois

Official Investigator - Dr. H. H. Mitchell
Collaborator - Miss Marjorie Edman
Administrative Official - Mr. H. P. Rusk

Contract W11-009-qm-70205

1 Sep. 1946 - 30 Sep 1947 '47 Funds \$6,675

TERMINATE

N-802 Nutritional Requirements for Man at Work

Harvard University, Graduate School of Business
Administration, Laboratory of Industrial Physiology,
Boston 63, Massachusetts

Official Investigator - Dr. E. L. Gray
Collaborator - Dr. Robert Kark
Administrative Official - Edward Reynolds

Contract W11-009-qm-70250

1 Nov 1946 - 30 June 1947 '47 Funds \$10,500

1 July 1947 - 31 July 1947 '48 Funds O-\$ 300

N-1105 Effect of Stress Factors on Nutrition

Emory Thurston Laboratories, 1207 S. Vermont Ave.,
Los Angeles 6, California

Official Investigator - Dr. B. H. Ershoff
Collaborator - Dr. H. B. McWilliams
Administrative Official - Mr. Emory W. Thurston

Contract W11-009-qm-70168

1 July 1946 - 31 Dec. 1947 '47 Funds \$12,000

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$ 8,000

EFFECT OF ENVIRONMENT ON NUTRITION

N-1113 Effect of Previous Diet on the Ability of Animals
To Withstand Adverse Conditions

University of Utah, Department of Biochemistry,
Salt Lake City, Utah

Official Investigator - Dr. L. T. Samuels
Collaborator - Dr. Roger Reinecke
Administrative Official - Mr. Leon D. Garrett

Contract W44-109-qm-805

1 Aug. 1945 - 31 Dec. 1947 '47 Funds \$10,175

TERMINATE

MICROBIOLOGICAL ASPECTS OF HEALTH HAZARDS IN FOODS
CF-61-03-10

- M-200 Clostridium botulinum in Canned Bread
University of Chicago, Food Research Institute,
Chicago 37, Illinois

Official Investigator - Dr. Gail M. Dack
Administrative Official - Dr. Gail M. Dack

Contract W11-009-qm-70240
21 October 1946 - 30 June 1948 '47 Funds \$8,750

TERMINATE
- M-201 Investigation of Rope and Botulinum in Canned Bread
University of Minnesota, Hormel Institute,
Minneapolis, Minnesota

Official Investigator - Dr. H. O. Halvorson
Collaborators - Dr. E. C. Stakman
 - Dr. C. M. Christanson
 - Dr. W. F. Geddes

Administrative Official - William T. Middlebrook

Contract W11-009-qm-70264 '47 Funds \$9,330
1 Jan. 1947 - 30 June 1948

TERMINATE
- M-605 Spore Formation and Spore Germination of Anaerobic Food Spoilage Organisms, Especially Clostridium botulinum
University of Texas, Austin 12, Texas

Official Investigator - Dr. J. W. Foster
Administrative Official - Dr. T. S. Painter

Contract W11-009-qm-70190
1 July 1946 - 31 Dec. 1947 '47 Funds \$9,800

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$6,600

MICROBIOLOGICAL ASPECTS OF HEALTH HAZARDS IN FOODS

M-606 Factors Affecting Heat Resistance of Spores of
Clostridium botulinum

University of Chicago, Food Research Institute,
Chicago 37, Illinois

Official Investigator - Dr. Gail M. Dack
Administrative Official - Dr. Gail M. Dack

Contract W11-009-qm-70201

1 July 1946 - 31 Dec. 1947 '47 Funds \$11,750

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A-\$ 8,000

M-608 Incidence of Putrefactive Anaerobic Spores in
Meat Products Prior to Heat Processing

Iowa State College, Bacteriology Section,
Agricultural Experiment Station, Ames, Iowa

Official Investigator - Dr. Max Levine
Administrative Official - Mr. R. E. Buchanan

Contract W11-009-qm-70267

15 Feb. 1947 - 15 Aug. 1948 '47 Funds \$ 7,050

'48 Funds (?)

M-609 The Determination of Base Line Data on the Presence
of Heat Resistant Putrefactive Spores in Meat Products

Armour and Company, Chemical Research and Development
Department, Union Stock Yards, Chicago 9, Illinois

Official Investigator - Dr. Victor Conquest
Collaborator - Mr. B. M. Shinn

Contract by Cooperative Arrangement

6 March 1947 - 5 March 1948

MICROBIOLOGICAL ASPECTS OF HEALTH HAZARDS IN FOODS

M-900 Mode of Action of Certain Anti-bacterial Agents

University of Texas, Austin 12, Texas

Official Investigator - Dr. Orville Wyss
Administrative Official - Dr. T. S. Painter

Contract W11-009-qm-70178

1 July 1946 - 31 Dec. 1947 '47 Funds \$14,000

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$11,000

M-903 Significance of Salmonella Types

University of Chicago, Food Research Institute,
Chicago 37, Illinois

Official Investigator - Dr. Gail M. Dack
Collaborator - Mr. Morris Schneider
Administrative Official, - Dr. Gail M. Dack

Contract W11-009-qm-70305

1 Jan. 1947 - 31 Dec. 1948 '47 Funds \$7,000

'48 Funds (?)

1. *Journal of the American Medical Association*, 1997; 277: 100-105.

CF-61-04-04

University of Minnesota, University Farm,
St. Paul 8, Minnesota

Official Investigator - Dr. W. F. Geddes
Collaborator - Dr. Thomas P. Singer
Administrative Official - Mr. H. Macy

1 July 1946 - 31 Dec, 1947	147 Funds	\$6,000
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1 Jan, 1948 - 31 Dec, 1948 '48 Funds A- \$6,000

Kroger Food Foundation, Cincinnati 4, Ohio

Proctor and Gamble Company, Bakery Research Dept.,
Ivorydale 17, Ohio

Official Investigators - Dr. George Garnatz (Kroger)
Dr. F. J. Coughlin (P&G)

Collaborators - Dr. H. J. Loving (Kroger)
Dr. W. Rohrbaugh (Kroger)
Dr. J. T. R. Andrews (P&G)

Contract by Cooperative Arrangement

1 October 1946 - 30 September 1947

The Laboratory of Polarographic Analysis, 7002 S.
Halsted Street, Chicago 21, Illinois

Official Investigator - Dr. Hoy A. Cranston
Collaborator - Mr. John B. Thompson (QMF&CI)

Administrative Official - Dr. Hoy A. Cranston

1 July 1946 - 31 Dec. 1947	'47 Funds	\$3,000
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1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$2,000

LIPID DETERIORATION

L-307 A Study of Oxidative Deterioration of Milk Fat

Iowa State College, Department of Dairy Industry,
Ames, Iowa

Official Investigator - Dr. E. W. Bird
Collaborators - Dr. G. P. Whitlock
 - Dr. R. L. Handwerk
 - Dr. R. D. Powell
 - Dr. J. H. Zalete
Administrative Official - Mr. R. E. Buchanan

Contract W11-009-qm-70191

1 Sep. 1946 - 31 Dec. 1947 '47 Funds \$9,480

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$7,440

L-308 Trace Metal Contamination and Its Effect on Milk Fat Deterioration

Kraft Food Company, 500 Peshtigo Court,
Chicago 90, Illinois

Official Investigator - Dr. E. K. Nielsen
Collaborator - Dr. E. W. Bird
Administrative Official - Mr. Robert J. Remaley

Contract by Cooperative Arrangement

1 July 1946 - 30 June 1948

L-309 Lipid Deterioration in Dairy Products

Cornell University, New York State College of
Agriculture, Ithaca, New York

Official Investigator - Dr. V. N. Krukovsky
Administrative Official - W. I. Meyers

Contract W11-009-qm-70253

1 Jan. 1947 - 31 Dec. 1947 '47 Funds \$5,400

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A-\$5,400

LIPID DETERIORATION

L-601 Fat Rancidity in Eviscerated Poultry

Kansas State College, Agricultural Experimental Station, Manhattan, Kansas

Official Investigator - Dr. F. A. Kummerow
Administrative Official - Director L. E. Call

Contract W11-009-qm-70175

1 July 1946 - 30 June 1947 '47 Funds \$6,000

1 July 1948 - 30 June 1948 '48 Funds 0-\$8,000

L-701 Cytological and Histo-Chemical Studies of the Lipids in Vegetables & Their Role in Deterioration

University of California, College of Agriculture, Davis, California

Official Investigator - Dr. T. E. Weier
Collaborator - Dr. C. R. Stocking
Administrative Official - Dean C. B. Hutchison

Contract W11-009-qm-70209

1 July 1946 - 31 Dec. 1947 '47 Funds \$6,177.50

TERMINATE

L-703 Fractionation and Purification of Lipids in Vegetables

University of California, Medical School, Berkeley 4, California

Official Investigator - Dr. I. L. Chaikoff
Collaborator - Dr. D. J. Hanahan
Administrative Official - Mr. R. M. Underhill

Contract W11-009-qm-70208

1 July 1946 - 30 June 1947 '47 Funds \$ 9,050

1 July 1947 - 30 June 1948 '48 Funds 0-\$10,890

LIPID DETEIORATION

L-704 Deteriorative Changes in the Pigments of Vegetables
During Storage

University of California, Division of Food Technology,
Berkeley, California

Official Investigator - Dr. Gordon MacKinney
Administrative Official - Dean C. B. Hutchison

Contract W11-009-qm-70230

16 August 1946 - 31 Dec. 1947 '47 Funds \$2,660

TERMINATE

L-800 A Critical Survey and Evaluation of the Literature
on Fat Deterioration

University of Pittsburgh, Chemistry Department,
Pittsburgh, Pennsylvania

Official Investigator - Dr. B. F. Daubert
Collaborator - Dr. Marjorie Benoy
Administrative Official - Dr. H. E. Longenecker

Contract W11-009-qm-70186

1 July 1946 - 31 Dec. 1947 '47 Funds \$7,670.40

'48 Funds (?)

L-900 Fat Autoxidation and the Effects of Inhibitors

American Meat Institute Foundation, 5757 Drexel
Avenue, Chicago 37, Illinois

Official Investigator - Dr. B. W. Beadle
Collaborators - Dr. L. R. Dugan, Jr.
 - Dr. A. S. Henick
Administrative Official - Dr. H. R. Kraybill

Contract W11-009-qm-70217

16 August 1946 - 31 Dec. 1947 '47 Funds \$16,000

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$12,000

LIPID DETERIORATION

L-901 An Experimental Investigation of Oxidative
Rancidity in Fats

University of Pittsburgh, Pittsburgh 13, Pennsylvania

Official Investigator - Dr. B. F. Daubert
Collaborator - Mr. Althea Lowe
Administrative Official - Dr. H. E. Longenecker

Contract W11-009-qm-70181

1 July 1946 - 31 Dec. 1947 \$47 Funds \$7,862.60

1 Jan. 1948 - 31 Dec. 1948 \$48 Funds A- \$6,000

L-902 Course and Mechanism of the Autoxidation of Fats

University of Minnesota, Hormel Institute,
Austin, Minnesota

Official Investigator - Dr. W. O. Lundberg
Collaborator - Dr. Jacques R. Chipault
Administrative Official - Mr. W. T. Middlebrook

Contract W11-009-qm-70174

1 July 1946 - 31 Dec. 1947 \$47 Funds \$18,800

1 Jan. 1948 - 31 Dec. 1948 \$48 Funds A- \$12,600

L-903 Causes and Prevention of Oxidative Deterioration
in Fats

Purdue University, Department of Agricultural Chemistry,
Lafayette, Indiana

Official Investigator - Dr. F. W. Quackenbush
Collaborator - Dr. W. R. Lewis
Administrative Official - Mr. H. J. Reed

Contract W11-009-qm-70233

1 Jan. 1947 - 31 Dec. 1947 \$47 Funds \$9,000

\$48 Funds (?)

NON-ENZYMATIC BROWNING DETERIORATION
CF-61-04-05

B-200 The Influence of Environmental Conditions on the
Formation, Stability or Behavior of Furan Compounds

The Quaker Oats Company, 345 E. 25th Street,
Chicago 16, Illinois

Official Investigator - Dr. F. N. Peters

Contract by Cooperative Arrangement
1 Dec. 1946 - 30 November 1947

B-300 The Chemistry of Browning of Dry Milk Products

American Dry Milk Institute, Inc.,
221 LaSalle Street, Chicago 1, Illinois

Official Investigator - Dr. B. W. Fairbanks
Administrative Official - Dr. B. W. Fairbanks

Contract by Cooperative Arrangement
1 July 1946 - 30 June 1948

B-302 A Study of the Chemical Reactions Involved in the
Browning of Dried Milk Powder

Macdonald College, McGill University,
Dept. of Chemistry, Quebec, Canada

Official Investigator - Dr. R. A. Chapman
Collaborator - Mr. J. Moster

Contract by Cooperative Arrangement
24 March 1947 - 24 March 1948

NON-ENZYMATIC BROWNING DETERIORATION

B-401 The Chemical Deterioration of Dried Fruits During Storage

University of California, Food Technology Division,
Berkeley, California

Official Investigator - Dr. G. MacKinney
Collaborators - Dr. Floyd Stadtman
 - Dr. V. Haas
 - Dr. O. Temmer

Administrative Official - Dean C. B. Hutchison

Contract W11-009-qm-70216

16 August 1946 - 31 Dec. 1947 '47 Funds \$13,800

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$10,000

B-702 Discoloration of White Potatoes During Dehydration

Purdue University, Department of Agricultural Chemistry,
Lafayette, Indiana

Official Investigator - Dr. D. M. Doty
Collaborators - Dr. Laurenz Greene
 - Dr. Merglin S. Bergdoll
 - Dr. N. K. Ellis
Administrative Official - Mr. H. J. Reed

Contract W44-109-qm-1013

1 Nov. 1945 - 31 Dec. 1947 '47 Funds \$ 8,300

TERMINATE

B-902 Interaction of Carbohydrates with Amino Acids and Peptides from Standpoint of Promotion and Inhibition

University of Pittsburgh, Department of Chemistry,
Pittsburgh, Pennsylvania

Official Investigator - Dr. M. F. Dull
Collaborators - Dr. H. H. Beacham, Jr.
 - Dr. Richard H. Kline
Administrative Official - Dr. H. E. Longenecker

Contract W11-009-qm-70231

1 Jan. 1947 - 30 June 1948 '47 Funds \$7,260

'48 Funds (?)

NON-ENZYMATIC BROWNING DETERIORATION

B-903

The Browning Reaction

Northwestern University, Chemistry Department,
Evanston, Illinois

Official Investigator - Dr. Charles D. Hurd
Collaborators - Dr. C. Kelso
- Dr. E. Rondestvedt
Administrative Official - Dean Fred D. Fagg, Jr.

Contract W11-009-qm-70212

1 Aug. 1946 - 31 Dec. 1947 '47 Funds \$18,984

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$12,000

B-905

A Study of the Fundamental Nature of the Browning Reaction

Ohio State University Research Foundation,
Columbus, Ohio

Official Investigator - Dr. Melville Wolfrom
Collaborators - Dr. R. D. Schultz
- Mrs. Clare Spitler
Administrative Official - James S. Owens, Exec. Dir.

Contract W11-009-qm-70183

1 July 1946 - 31 Dec. 1947 '47 Funds \$15,000

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$10,000

B-906

The Browning Reaction in Sugar-Amino Acid Systems

Cornell University, New York State Agricultural
Experiment Station, Geneva, New York

Official Investigator - Dr. R. G. Rice
Collaborator - Dr. Zoltan I. Kertesz
Administrative Official - Dr. Elmer H. Stotz

Contract W11-009-qm-70188

1 July 1946 - 30 June 1948 '47 Funds \$ 600

1 July 1948 - 30 June 1949 '48 Funds A- \$ 300

NON-ENZYMATIC BROWNING DETERIORATION

B-907 A Study of Some Chemical Factors Involved in the Browning of Certain Food Constituents

Michigan State College of Agriculture and Applied Science, Chemistry Department, East Lansing, Michigan

Official Investigator - Dr. Charles Dodson Ball
Collaborator - Dr. John C. Speck
Administrative Official - Mr. Laurence L. Quill

Contract W11-009-qm-70213

1 Jan. 1947 - 31 Dec. 1947 '47 Funds \$7,250

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$7,250

B-908 The Browning Reaction As a Factor Involved in the Development of Color and Flavor in Foods

Central Research Laboratories, General Foods Corp.,
1125 Hudson Street, Hoboken, New Jersey

Official Investigator - Dr. H. M. Barnes
Collaborator - Mr. C. A. Kennedy
Administrative Official - Mr. Thomas M. Rector

Contract by Cooperative Arrangement
30 August 1946 - 29 August 1947

B-909 The Role of Hydroxymethylfurfural in Browning

Corn Products Refining Company, Argo, Illinois

Official Investigator - Dr. S. M. Cantor
Collaborator - Dr. G. R. Dean

Contract by Cooperative Arrangement
1 October 1946 - 30 September 1947

MICROBIOLOGICAL FOOD DETERIORATION

CF-61-04-06

M-100 Bacteriological Aspects of Pre-cooked Frozen Foods

University of Nebraska, Dept. of Bacteriology,
Omaha, Nebraska

Official Investigator - Dr. Millard F. Gunderson
Administrative Official - Dr. H. C. Lueth, Dean

Contract Arrangement Pending

1 July 1947 - 30 June 1948 '48 Funds O- \$6,415

M-601 A Study of Factors Affecting the Keeping Quality
of Bacon

Bureau of Animal Industry, Agricultural Research
Administration, U. S. Dept. of Agriculture, Washington D.C.

Official Investigator - Dr. B. T. Simms
Collaborator - Mr. O. G. Hankins
Administrative Official - Mr. P. V. Cardon

Transfer of Funds

Req. 49-106-0119-47

1 July 1946 - 30 Sep. 1947 '47 Funds \$10,000

TERMINATE

M-607 Investigation of Canned Bacon Spoilage

University of Minnesota, Hormel Institute,
Austin, Minn.

Official Investigator - Dr. H. O. Halverson
Collaborators - Dr. Henry Tsuchiya
 - Dr. John Ulrich
 - Dr. M. A. Muckerheide
Administrative Official - Mr. W. T. Middlebrook

Contract W11-009-qm-70176

1 July 1946 - 31 Dec. 1947 '47 Funds \$15,072

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$10,000

MICROBIOLOGICAL FOOD DETERIORATION

M-610 Molds of Meats

Duke University, Dept. of Botany,
Durham, North Carolina

Official Investigator - Dr. F. A. Wolf
Administrative Official - Dr. R. L. Flowers, Pres.

Contract Arrangement Pending
1 July 1947 - 30 June 1948 148 Funds 0- \$7,750

M-901 Action of Sterilizing Agents on Food

M-902 Fate of Fumigants in Treated Foods

University of California, Bacteriology Department,
Berkeley, California

Official Investigator - Dr. Michael Doudoroff
Collaborators - Dr. H. J. Phaff
- Dr. Rita W. Doudoroff
Administrative Official - Dr. Michael Doudoroff

Contract W11-009-qm-70200		
1 July 1946 - 31 July 1948	47 Funds	\$15,181
	48 Funds	(?)

BREAD DETERIORATION DUE TO STALING

CF-61-04-07

C-200 The Role of Starch in Bread Staling

The University of Nebraska, Department of
Agricultural Chemistry, Nebraska Experiment
Station, Lincoln, Nebraska

Official Investigator - Dr. R. M. Sandstedt
Collaborator - Dr. D. C. Beckord
Administrative Official - Dean W. W. Burr

Contract W11-009-qm-70214

1 Dec. 1946 - 31 Dec. 1947 '47 Funds \$10,259

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$10,386

C-204 The Relative Stability of Thiamin Chloride and
Other Derivatives in Canned Bread

Merck & Company, Inc., Research Laboratory,
Rahway, New Jersey

Official Investigator - Dr. H. N. Worthley
Collaborator - Dr. C. M. Hollenbeck

Contract by Cooperative Arrangement

1 July 1946 - 30 June 1948

C-205 Prevention of Bread Staling

Purdue University, Agricultural Experiment Station,
Lafayette, Indiana

Official Investigator - Dr. Roy N. Whistler
Administrative Official - Mr. H. J. Reed

Contract W11-009-qm-70223

1 Sep. 1946 - 29 Feb. 1948 '47 Funds \$6,000

1 Mar. 1948 - 29 Feb. 1949 '48 Funds A- \$4,000

BREAD DETERIORATION DUE TO STALING

C-300 The Physical and Chemical Changes Occurring in
Bread During Storage

University of Minnesota, University Farm,
St. Paul 8, Minnesota

Official Investigator - Dr. W. F. Geddes
Collaborators - Dr. D. Q. Briggs
 - Dr. D. E. Smith
 - Dr. C. W. Rice
Administrative Official - Mr. H. Macy

Contract W11-009-qm-70179

1 July 1946 - 31 Dec. 1947 '47 Funds \$15,400

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$12,800

C-302 Fundamental Investigations on the Stability of
Canned Bread

The Kroger Food Foundation, Cincinnati 4, Ohio

Official Investigator - Dr. George Garnatz
Collaborators - Dr. P. W. Hodler
 - Dr. W. Rohrbaugh

Contract by Cooperative Arrangement

1 October 1946 - 30 September 1947

C-304 The Effect of Various Bakery Ingredients on the
Rate of Staling of Bread

R. T. Vanderbilt Co., Inc., 33 Winfield Street,
East Norwalk, Connecticut

Official Investigator - Mr. Henry H. Favor
Collaborator - Mr. Floyd B. Crossland

Contract by Cooperative Arrangement

1 October 1946 - 30 September 1947

DAIRY PRODUCTS DETERIORATION

CF-61-04-08

D-202 Foam Properties of Dry Milks

American Dry Milk Institute Inc., 220 N. LaSalle St.,
Chicago 1, Illinois

Official Investigator - Dr. B. W. Fairbanks
Administrative Official - Dr. B. W. Fairbanks

Contract by Cooperative Arrangement
1 July 1946 - 30 June 1948

D-203 The Formation of Surface Layer of Dehydrated Milk

University of Denver, Bureau of Applied Science &
Engineering Research, Denver, Colorado

Official Investigator - Dr. Ralph M. Conrad
Collaborators - Dr. F. R. Blood
 - Dr. C. H. Witnah
Administrative Official - Mr. Alfred C. Nelson

Contract W11-009-qm-70206
1 August 1946 - 31 Dec. 1947 '47 Funds \$14,000
1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$10,000

D-205 The Isolation of the Compounds Responsible for
Unpalatable Dried Whole Milk

University of Illinois, Department of Dairy
Husbandry, Urbana, Illinois

Official Investigator - Dr. P. H. Tracy
Administrative Official - Dean H. P. Rusk

Contract W11-009-qm-70198
1 July 1946 - 31 Dec. 1947 '47 Funds \$ 8,600
1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$ 7,200

DAIRY PRODUCTS DETERIORATION

D-305 The Mechanism of Deteriorative Changes in Milk Products

University of Minnesota, Agricultural Experiment Station,
University Farm, St. Paul, Minnesota

Official Investigator	-	Dr. S. T. Coulter
Collaborators	-	Dr. W. B. Combs
	-	Dr. Robert Jenness
Administrative Official	-	Mr. W. T. Middlebrook

Contract W11-009-qm-70187

1 July 1946 - 31 Dec. 1947	'47 Funds	\$22,500
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1 Jan. 1948 - 31 Dec. 1948	'48 Funds	A- \$15,000
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MEAT PRODUCTS DETERIORATION
CF-61-04-09

A-300 Post Mortem Changes in Beef; the Effects of Aging
and Cooking Methods

Iowa State College, Agricultural Experiment Station,
Ames, Iowa

Official Investigators	-	Dr. Belle Lowe
	-	Dr. R. R. Sealock
Collaborators	-	Dr. Dorothy Harrison
	-	Dr. Inez Prudent
	-	Dr. Anna Dale
	-	Dr. Marion Barkley
Administrative Official	-	Mr. R. E. Buchanan

Contract W11-009-qm-70185

1 July 1946 - 31 Dec. 1947	: 47 Funds	\$17,188
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1 Jan. 1948 - 31 Dec. 1948	: 48 Funds	A- \$12,000
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FRUIT PRODUCTS DETERIORATION
CF-61-04-10

F-302 Pectic Changes in Dehydrated Foods

University of Delaware, Agricultural Experiment
Station, Newark, Delaware

Official Investigator - Dr. George L. Baker
Collaborator - Dr. W. Gail Murray
Administrative Official - Mr. George L. Schuster

Contract W11-009-qm-70173

1 July 1946 - 31 Dec. 1947 '47 Funds \$7,090

'48 Funds (?)

F-303 Pectin Deterioration Studies

Oregon State College, Food Technology Department,
Corvallis, Oregon

Official Investigator - Dr. E. H. Wiegand
Collaborators - Dr. Oliver J. Worthington
 - Mr. M. B. Hatch
Administrative Official - Mr. Wm. A. Schoenfeld

Contract W11-009-qm-70245

1 Jan. 1947 - 31 Dec. 1947 '47 Funds \$5,000

'48 Funds (?)

VEGETABLE PRODUCTS DETERIORATION

CF-61-04-11

V-200 Study of Oxidative Enzymes in White and Sweet
Potatoes

Overly Biochemical Research Foundation, Inc.,
255 West 31st Street, New York, New York

Official Investigator - Dr. Arthur L. Schade
Collaborator - Dr. Hilton B. Levy
Administrative Official - Mr. James S. Wallerstein

Contract Arrangement Pending

1 July 1947 - 30 June 1948 '48 Funds 0 - \$2,000

PREFERENCE

PSYCHOPHYSIOLOGICAL STUDIES

CF-61-05-02

P-1001 Studies on the Physiology of Appetite

Jefferson Medical College, 1025 Walnut Street,
Philadelphia 7, Pennsylvania

Official Investigators - Dr. J. Earl Thomas
- Dr. Abraham Cantarow
Administrative Official - Dr. W. H. Perkins

Contract W11-009-qm-70227

1 Nov. 1946 - 31 Dec. 1947 '47 Funds \$9,100

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$9,000

P-1004 Study on Appetite Depressants in Relation to
Ration Acceptability

Columbia University, College of Physicians and
Surgeons, New York, New York

Official Investigator - Dr. Theodore F. Zucker
Administrative Official - Dr. Willard C. Rappleye

Contract W44-109-qm-1005

1 Oct. 1945 - 31 Dec. 1947 '47 Funds \$8,280

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$5,280

P-1005 Effect of Spices and Condiments on the Gastric
Mucosa and Gastric Secretions

University of Minnesota Medical School, Minneapolis
14, Minnesota

Official Investigator - Dr. Owen Wangensteen
Collaborators - Dr. Enrique Sanchez
- Dr. Stanley Friesen
Administrative Official - Mr. William B. Middlebrook

Contract W11-009-qm-70215

1 Oct. 1946 - 30 Jun. 1947 '47 Funds \$9,490

1 Jul. 1947 - 31 Dec. 1947 '48 Funds O- \$14,956.40

PSYCHOPHYSIOLOGICAL STUDIES

P-1007 Effect of Food and Environment on Food Intake

Yale University, School of Medicine,
New Haven, Connecticut

Official Investigator - Dr. John R. Brobeck
Administrative Official - Dr. Francis G. Blake

Contract W11-009-qm-70195

1 Oct. 1946 - 30 Sep. 1948 '47 Funds \$7,000

1 Oct. 1948 - 30 Sep. 1949 '49 Funds A- \$4,000

P-1009 Studies on the Physiology of Voluntary Food Intake

Mount Sinai Hospital, 5th Avenue & 100th Street,
New York, New York

Official Investigator - Dr. Franklin Hollander
Administrative Official - Dr. Joseph Turner

Contract W11-009-qm-70204

1 Jul. 1946 - 31 Dec. 1947 '47 Funds \$17,737

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$12,000

P-1010 Influence of Variations in Diet Upon Voluntary Food Intake of Experimental Animals

Sharpe & Dohme Inc., Medical Research Division,
Philadelphia 1, Pennsylvania

Official Investigator - Dr. Richard H. Barnes
Collaborators - Dr. Jesse W. Huff
Dr. David K. Bosshardt

Contract by Cooperative Arrangement

1 July 1946 - 30 June 1948

PSYCHOPHYSIOLOGICAL STUDIES

P-1011 The Physiology of Appetite

Columbia University, School of Public Health,
New York 32, New York

Official Investigator - Dr. Leonard J. Goldwater
Collaborator - Dr. Maurice Shils
Administrative Official - Dr. Willard C. Rappleye

Contract W11-009-qm-70284

1 March 1947 - 29 Feb. 1948 '47 Funds \$6,900

1 Mar 1948 - 28 Feb. 1949 '48 Funds A- \$6,900

P-1012 Effect of Diet and Environment on Pancreatic Secretion

University of California, Medical School,
Berkeley, California

Official Investigator - Dr. I. L. Chaikoff
Collaborator - Dr. S. Chernick
Administrative Official - Mr. R. M. Underhill

Contract W11-009-qm-70208

1 July 1946 - 31 Dec. 1947 '47 Funds \$13,410

'48 Funds (?)

P-1014 Human Studies on the Physiology of Acceptability

University of Southern California, Medical School,
3551 University Avenue, Los Angeles 7, California

Official Investigators - Dr. H. J. Deuel, Jr.
- Dr. R. M. Johnson
Collaborator - Dr. J. W. Mehl
Administrative Official - Mr. Anson P. Hoyt

Contract W11-009-qm-70226

1 Sep. '46 - 30 Jun. 1947 '47 Funds \$26,375

1 Jul. 1947 - 31 Dec. 1947 '48 Funds O- \$18,000

PSYCHOPHYSIOLOGICAL STUDIES

P-1015 Studies on Appetite Mechanisms as Determined by Nutrition

University of Utah, School of Medicine,
Salt Lake City, Utah

Official Investigator - Dr. Leo T. Samuels
Administrative Official - Mr. A. L. Olpin

Contract W11-009-qm-70307

1 April 1947 - 31 Mar. 1948 '47 Funds \$9,137

1 April 1948 - 30 Sep. 1948 '48 Funds A- \$4,500

P-1016 Influence of Food Constituents Upon Acceptability of Foods

New York University, Goldwater Memorial Hospital,
Welfare Island, New York 17, New York

Official Investigator - Dr. Shepard Shapiro
Collaborator - Dr. J. Murray Steele
Administrative Official - Dr. J. Murray Steele

Contract W11-009-qm-70286

1 April 1947 - 31 Mar. 1948 '47 Funds \$11,160

1 April 1948 - 30 Sep. 1948 '48 Funds A- \$ 5,600

P-1017 Utilization of Proteins Correlated with Appetite and Intestinal Flora

Rutgers University, Bureau of Biological Research,
New Brunswick, New Jersey

Official Investigator - Dr. James B. Allison
Collaborator - Dr. John A. Anderson
Administrative Official - Dean Harry G. Owen

Contract Arrangement Pending

1 July 1947 - 30 June 1948 '48 Funds \$4,025

PSYCHOPHYSIOLOGICAL STUDIES

- P-1018 Preparation of a Critical Review of the Psychological Literature Upon Food Acceptance in Animals and Analysis of Laboratory Data Relating to Palatability and Appetite

University of Illinois, Urbana, Illinois

Official Investigator - . Dr. Paul Thomas Young
Administrative Official - George D. Stoddard, Pres.

Contract Arrangement Pending

1 October 1947 - 31 December 1947 '48 Funds O- \$1,235

- P-1100 Food Acceptance Under Emotional Stress

University of Pittsburgh, Department of Experimental Psychology, Pittsburgh, Pennsylvania

Official Investigator - Dr. Robert A. Patton
Collaborator - Dr. Francis J. Pilgrim
Administrative Official - Dr. H. E. Longenecker

Contract W44-109-qm-875

1 July 1945 - 31 Dec. 1947 '47 Funds \$14,868

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$ 8,448

PSYCHOPHYSICAL STUDIES OF TASTE AND ODOR PERCEPTION
CF-61-05-06

P-301 Chemical Changes in Milk Powder During Manufacture
and Storage and the Response of the Taste Mechanism
to These Changes

Ohio State University Research Foundation,
Columbus 10, Ohio

Official Investigator - Dr. R. B. Stoltz
Collaborator - Dr. Donald V. Josephson
Administrative Official - Mr. James S. Owens

Contract W11-009-qm-70182

1 July 1946 - 31 Dec. 1947 '47 Funds \$7,500

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$5,000

P-1000 Human Appetite

Permanente Foundation Hospital, Department of
Medical Research, 280 W. MacArthur Boulevard,
Oakland, California

Official Investigator - Dr. Franz R. Goetzl
Administrative Official - Dr. Franz R. Goetzl

Contract W11-009-qm-70134

15 Nov. 1945 - 31 Dec. 1947 '47 Funds \$8,800

1 Jan. 1948 - 31 Dec. 1948 '48 Funds A- \$10,000

PSYCHOSOCIOLOGICAL STUDIES
CF-61-05-07

P-900 Appetite Levels of Food Consumption - Vermont

University of Vermont, Department of Home Economics,
Burlington, Vermont

Official Investigator - Dr. Florance B. King
Administrative Official - Mr. John S. Mills

Contract W44-109-qm-1011

1 Oct. 1945 - 31 Aug. 1947 47 Funds \$8,640

TERMINATE

P-903 Appetite Levels of Food Consumption - South Carolina

The Clemson Agricultural College, Clemson, South
Carolina

Official Investigator - Miss Ada M. Moser
Collaborators - Miss Annie May Hildebrand
 - Miss Margaret Brand Rost
Administrative Official - Mr. R. F. Poole

Contract W11-009-qm-70197

1 July 1946 - 31 Dec. 1947 47 Funds \$5,070

TERMINATE

P-907 Appetite Levels of Food Consumption - Iowa

Iowa State College, Dept. of Food & Nutrition,
Ames, Iowa

Official Investigator - Dr. Ercel Epright
Collaborators - Dr. Jessie Wallace
 - Dr. Margaret Keller
Administrative Official - Mr. R. E. Buchanan

Contract W11-009-qm-70229

1 July 1946 - 31 Dec. 1947 47 Funds \$14,347.50

TERMINATE

CONTAINER RESEARCH & DEVELOPMENT

CONTAINER MATERIALS

CF-36-07-08

R-101 Basic Design Data For The Use of Fiberboard
in Shipping Containers

Forest Products Laboratory, U. S. Dept. of
Agriculture, Madison, Wisconsin.

Official Investigator - Mr. T. A. Carlson
Administrative Official - Mr. George M. Hunt

Transfer of Funds

1 July 1947 - 30 June 1948 '48 Funds 0- \$20,000

PROJECT FILE NUMBERS

RESEARCH PLANNING

S-100-199 - Research Surveys

BROWNING

B-100-199 - Foods General
B-200-299 - Cereal and Baked Products
B-300-399 - Dairy Products
B-400-499 - Fruit Products
B-500-599 - Miscellaneous Products
B-600-699 - Animal Products
B-700-799 - Vegetable Products
B-800-899 - Literature Studies
B-900-999 - Studies Using Model Systems

LIPIDS

L-100-199 - Foods General
L-200-299 - Cereal and Baked Products
L-300-399 - Dairy Products
L-400-499 - Fruit Products
L-500-599 - Miscellaneous Products
L-600-699 - Animal Products
L-700-799 - Vegetable Products
L-800-899 - Literature Studies
L-900-999 - Studies Using Model Systems

PROJECT FILE NUMBERS

MICROBIOLOGY

M-100-199	- Foods General
M-200-299	- Cereal and Baked Products
M-300-399	- Dairy Products
M-400-499	- Fruit Products
M-500-599	- Miscellaneous Products
M-600-699	- Animal Products
M-700-799	- Vegetable Products
M-800-899	- Literature Studies
M-900-999	- Studies Using Model Systems

NUTRITION

N-100-199	- Foods General
N-200-299	- Cereal and Baked Products
N-300-399	- Dairy Products
N-400-499	- Fruit Products
N-500-599	- Miscellaneous Products
N-600-699	- Animal Products
N-700-799	- Vegetable Products
N-800-899	- Literature Studies
N-900-999	- Ration Evaluation Studies
N-1000-1099	- Food Composition Studies
N-1100-1199	- Metabolism Studies

PREFERENCE (Food Acceptance Research)

P-100-199	- Foods General
P-200-299	- Cereal and Baked Products
P-300-399	- Dairy Products
P-400-499	- Fruit Products
P-500-599	- Miscellaneous Products
P-600-699	- Animal Products
P-700-799	- Vegetable Products

PROJECT FILE NUMBERS

PREFERENCE (Food Acceptance Research)

P-800-899 - Literature Studies
P-900-999 - Survey Studies
P-1000-1099 - Physiological Studies
P-1100-1199 - Psychological Studies
P-1200-1299 - Statistical Studies

ANIMAL PRODUCTS

A-100-199 - Literature Studies
A-200-299 - Studies Using Model Systems
A-300-399 - General Studies

CEREAL PRODUCTS

C-100-199 - Literature Studies
C-200-299 - Studies Using Model Systems
C-300-399 - General Studies

DAIRY PRODUCTS

D-100-199 - Literature Studies
D-200-299 - Studies Using Model Systems
D-300-399 - General Studies

FRUIT PRODUCTS

F-100-199 - Literature Studies
F-200-299 - Studies Using Model Systems
F-300-399 - General Studies

PROJECT FILE NUMBERS

GENERAL PRODUCTS

G-100-199 - Literature Studies
G-200-299 - Studies Using Model Systems
G-300-399 - General Studies

VEGETABLE

V-100-199 - Literature Studies
V-200-299 - Studies Using Model Systems
V-300-399 - General Studies

CONTAINER

R-100-199 - Plastics

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